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ABSTRACT

The author reviews theories and research on the etiology of infantile autism, specifically regarding its organic basis. He cites controversies over its organic vs. environmental basis and over the family's impact on autism. Quotes from such theoriests as L. Kanner, B. Bettleheim, and B. Rimland are presented along with E. R. Ritvo and M. Coleman. The author asserts that statements attributing autism to organic factors are without empirical basis. Similarly, theories about the socioeconomic status (SES) of parents of autistic children are considered, and the findings of the author's own research are offered as evidence that there appears to be a link between parents' upper SES and incidence of autism in their children. Alternative theories, such as those of M. Rutter who propose that autism is some type of cognitive deficit, are reviewed. (CL)

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Myth or Fact?

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The Organic Etiology of Infantile Autism: Myth or Fact

Victor D. Sanua, Ph.D. *

One of the greatest controversies in child psychiatry pertains to the etiology of infantile autism. One group of investigators and writers feels that the illness is organically determined, while another group feels that it is environmentally determined. Among the major proponents of these two schools of thought, we can include Ritvo (1976) of The Neuropsychiatric Institute at UCLA and Rimland (1964) on the organic side of the controversy and Bettelheim (1967) on the environmental side. The purpose of this paper is to examine some of the thinking to be found in the literature in support of the organic argument. After our intensive analysis of the literature, we draw the conclusion that the organic etiology is more myth than fact.

Another controversy centers around whether parents of autistic children tend to be of upper class. This second controversy is closely tied to the previous one, since differences in rates of infantile autism among different social classes would be difficult to explain from the organic point of view. In 1943, Kanner, in an article in which he introduced the concept of infantile autism, suggested that autistic children had an "inborn disturbance of affective contact". However, in 1949, he states:

> "Most of the patients were exposed from the beginning to parental coldness obsessiveness, and a mechanical type of attention to material needs only. They were the objects of observation and experiments conducted with an eye on fractional performance rather than with genuine warmth and enjoyment." (p.425)

In an article written in 1956 which he co-authored with

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Eisenberg, he makes a similar statement regarding the "emotional frigidity in the typical autistic family (which) suggests a dynamic experiential factor in the genesis of the disorder in the child." (p. 561)

However, in July of 1969, at the Conference of the National Society for Autistic Children held in Washington, D.C., he pointed out that he had been misquoted from the beginning and that he always described infantile autism as innate. To this he added, "Herewith, I officially acquit you people as parents. (This is described in an article by Crawley, (1971, p. 335). Nonetheless, there seems to be somewhat of an inconsistency in presenting his views. First of all, let us see what Kanner had to say about childhood schizophrenia and infantile autism with regard to this controversy. In the most recent edition of his book, Child Psychiatry (1972) he states:

> Even from a purely statistical point of view, the correlation of childhodd schizophrenia with parental attitudes is far higher and more consistent than its correlation with heredity, configuration in the body, metabolic disorders, or any other factor.
>
> ...Even these few examples suffice to show how, regardless of the problems of heredity and constitution, life experiences have confused these children, made normal relationships impossible and driven them to withdrawal and schizophrenic behavior (p. 707).

In the same book, he bemoans the fact that the organicity theory leads to a pessimistic outlook regarding treatment approaches. He indicated the following:

> "The notion of schizophrenia as ancestrally predordained destiny and an irreversible "disease process" created a spirit of paralyzing futility. Occasional remissions were interpreted as the spontaneous work of inexplicable fate. Once the diagnosis was made, usually when the clinical picture was well developed, the children were interned in custodial institutions, there to yield to the temptation to further, if not complete withdrawal, which was thus fostered rather than remedied. Bankruptcy was anticipated and achieved" (p. 708).

When he discusses treatment for these children, he appears to be quite eclectic and berates those who espouse one approach of therapy with autistic children with the following statement:

> "There are those who look on infantile sexuality alone, others on early mother-child relationship, others on faulty conditioning, still others on neuropathology or biochemistry alone as the open sesame to the gates of understanding and the passkey to therapeutic planning. What happens to a psychotic child and his family often has been "programmed" not so much in accord with the specific circumstances of each patient's illness as by the predictably uniform ritualism of the approach-

er's orientation" (p. 456).

Kanner had pointed out many years ago that it became a habit to dilute the original concept of infantile autism and that overnight, the country seemed to have been populated by a "multitude of autistic children". Mentally retarded children with some bizarre behavior were labelled autistic. In his criticism, Kanner singles out studies by Ornitz and Ritvo (1968) who had declared that "early infantile autism, atypical development and certain cases of childhood schizophrenia are essentially variants of the same disease". He feels that these authors have shoved different conditions under a common etiologic umbrella. This obviously explains why these same authors have used studies with various diagnoses and as a result, Kanner's original finding was not confirmed as to the superior SES of the parents of autistic children. Rimland (1974) reports that Kanner suggested that only 10% of the children who are labelled autistic are genuinely autistic as he defined them originally.

The writer wants to make it clear that infantile autism could not be attributed solely to "bad parenting" as conceptualized by Bettelheim (1967). He feels that sociocultural factors and special events occurring at the time of the birth of the child could be implicated. It is often noted that mothers of autistic children have also raised normal children, and it is obvious that the birth

of every child might have taken place during periods which were quite different for the mother. It is possible that a warm, loving mother may give birth to a child at a very critical period in her life while going through some serious upheavals which are beyond her control, such as death of a loved one;or marital problems might cause a temporary depression and the newborn receives the brunt of her problems. Tinbergen (1973), a Nobel prize laureate, has expressed similar ideas in the following manner:

> "...First, that many autists are potentially normal children whose affiliation and subsequent socialization processes have gone wrong in one way or another; and second, this can often be traced back to something in the early environment--on occasion a frightening accident, but most often something in the behavior of the parents, in particular, the mothers. Let me hasten to add that in saying this we are not blaming these unfortunate parents. Very often they seem either simply inexperienced (hence perhaps the high incidence among firstborns) or overapprehensive: or overefficient and intrusive; or, perhaps most often they are people who are themselves under stress. For this and many other reasons, the parents of autistic children deserve as much compassion, and may be as much in need of help as the autists themselves" (p. 23).

For a discussion on how sociocultural factors may in-

fluence the birth of a child and prevent what Klauss et. al. (1976) have pointed out the necessary "bonding", the reader is referred to the reviews by Sanua (1978, 1980, 1981, 1981A, 1981B, 1981C)

Statements by Researchers on the Organic Etiology of Infantile Autism

Let us now turn to the statements made by psychiatrists who seem to have firm convictions regarding the organic etiology of infantile autism. Ritvo appears to be one of the more quoted specialists in this field. He had the following to say in a recent book which he edited:

> "I feel we can say with certainty that autism is a physical disease of the brain (my italics), (1976, p. 6).

On the same page, a few lines later, he states:

> "Follow-up studies are just beginning to appear in the medical literature. They will eventually answer the question as to the natural history of the disease. Since we do not know the specific cause, nor neuroanatomical pathology involved, specific etiologically-based therapy is unavailable (p. 6).

The latter statement clearly contrasts with the expression of certainty of his previous formulation. Interestingly, a year later, Ritvo (1977) who had done extensive biological research, wrote the following conclusion after conducting a survey of the literature on the biochemical studies

of autistic children and other groups:

> In this brief annotation, we have surveyed the biochemical studies of patients with autism, childhood schizophrenia and related developmental disabilities. These studies have raised more questions than they have answered - a sure sign that our science is young (p. 378).

Ritvo, who has been Chairman of the Professional Board of the National Society for Autistic Children, has provided for this Organization the following definition of infantile autism:

> "Autism is a severely incapacitating life-long developmental disability which typically appears during the first three years of life. It occurs approximately five out of every 10,000 births and it is four times more common in boys than girls. It has been found throughout the world in families of all racial, ethnic and social background. No known factors in the psychological environment of a child have been known to cause autism. <u>The symptoms are caused by physical disorders of the brain</u>". (my italics).

Since the evidence of brain involvement is not available, an uncritical acceptance of this definition instills a rigidity of thinking which does not allow for considerations of new ideas. Prejudgment on this most important area of child psychopathology can only lead to obscurantism. This definition by Ritvo reflects possibly the inclusiveness of his definition. The only dependable figure on prevalance of which we are

aware is that Lotter (1966) in England, who was specific in indicating that while the rate is 4.5 per 10,000 of highly disturbed children, it is only 2.1 per 10,000 for children diagnosed as genuinely autistic.

Guthrie and Wyatt (1975) in a review of the literature on the biochemistry of childhood psychoses, point out that most of the reported differences between autistic and non-autistic children probably reflect the effect of secondary or tertiary factors. In conclusion, they state the following:

> "There is currently no consistent evidence for a biochemical cause or correlation with the etiology of childhood psychoses. None of the biochemical parameters studied to date, including the biogenic amines, the pink spot, the mauve factor, bufotenine, histamine, serum factors, chromosomal abnormalities, endocrinological changes or other metabolic factors, has been shown to be causally related to the etiology of one or more of the childhood psychoses. (p. 29)

These authors are well aware of the fact that different investigators use different definitions of the concept of child psychosis and inevitably increase the amount of variance between studies.

Coleman in recent years has been conducting extensive research on infantile autism. Like Ritvo, she has the firm belief that the illness is organic in nature but again, there is very little in her findings to substantiate that belief.

She states in a recent chapter (1979) that today most investigators agree that organic factors are involved in the etiology of autistic symptoms. However, she points out in the same paragraph, the "anatomical locations or neurophysiological system or biochemical pathway involved in the lesion of these patients have not been specifically identified. At this time, because of the lack of adequate autopsy series, the most elementary questions (my italics) regarding this syndrome have yet to be answered." (p. 265).

She offers her readers one example of this type of evidence regarding the genetic etiology of the syndrome. She found that six cases out of series of 78 autistic children had a relative who was also autistic. Five of the six were males and four cases were Jewish. In her conclusion she points out, "this is considerably higher than the percentage of Jewish participation (18%) in our total sample.....One may assume for this subgroup that there may be a genetic lesion that causes the symptoms of primary infantile autism in some cases." (p. 270). Needless to say that she draws certain conclusions on the basis of flimsy data.

Dr. Coleman was the keynote speaker in 1980 at the Conference of the National Society of Autistic Children which took place in Washington.

Intensive studies are presently being conducted at the Child Study Center of the Yale University School of

Medicine by a group of investigators headed by Dr. Donald Cohen. In a review article (which) he authored with Caparulo, (1975) he points out that autism is found throughout the world, in every social class, with a uniform clinical picture. All the evidence suggests that autism is like some of the now well-known inborn disorders of metabolism. Again on the same page, he points out, "However, knowledge about possible metabolic problems in autistic children will require considerably more research than is now available". (p. 184).

Major English researchers on infantile autism have likewise expressed their opinion on the lack of definite evidence that the etiology of the illness could be attributed to organic factors. Wing (1973), who has been highly critical of Tinbergen's point of view and who has been a strong advocate on the organic etiology of infantile autism, expressed her own doubts about the finality of her views. She states the following:

"There are many different theories as to the nature of early infantile autism. None has, as yet, any solid formation in facts derived from experiments and from clinical observations". (p. 246).

Rutter (1977), who has written quite extensively on the subject of infantile autism, has developed his own basic theory on infantile autism which he considers some type of cognitive deficit. He feels that this probably plays a crucial role in the genesis of infantile autism, but he makes it clear that little is known about the biological basis of the deficit.

(p. 734).

There are some who feel that infantile autism may be due to genetic factors as exemplified by the statements discussed by Coleman in a previous section of this paper. However, Hanson and Gottesman (1976) indicated that after reviewing the literature, they found no support for the genetic point of view.

Thus far, we have had several expressions of conviction that infantile autism and other childhood psychoses are all caused by organic factors, but the empirical data to support this point of view is lacking completely. It is not surprising that the usual reader and even professionals in the mental health field believe these statements of conviction are based on empirical studies and thus, unknowlingly, they become the adherents of a school of thought which has no supporting evidence.

Bleuler (1978) has discussed this problem of attributing organic etiology to mental illness with little data to support that conviction. He states:

> "Through to the present day, many clinicians and researchers are fully convinced that primary physical disorders (functional or structural) constitute the most essential onset conditions for schizophrenia, although they are unable to identify any clear symptoms indicating such supposed physical disorders. At certain times, researchers were even in danger of being reproached for having an unscientific, uncritical mentality and ostracized if they did not conform by "admitting" that there

were physical explanations for schizophrenia. In a peculiar reversal of otherwise valid norms, assumptions used to be declared "scientific" that resulted from pure speculation or emotional needs, and any attempt to consider information that could actually be proved was rejected as "unscientific" (p. 447).

The question that we might raise is why so much effort is being expended on organic research, since the returns have been so much inconsequential. It is felt that individuals responsible for the disbursement of research funds are more likely to support research based on laboratory work, feeling that such a research is more "scientific". Attempts to propose other avenues as suggested by Bleuler would be rejected as being "unscientific".

Social Class and Infantile Autism

Another controversy related to the organicity of infantile autism is whether parents of autistic children tend to be of higher socioeconomic level. The implication of such findings is to be found in the statement made by Cantwell, Baker and Rutter (1978):

> "The link between social class and autism does not appear to fit with a purely biological causation of autism, and it remains an awkward finding which still demands an explanation"(p. 290)

Thus, it is felt that those who believe in the organic etiology of infantile autism would tend to discount studies which

reveal the SES superiority of parents of autistic children. Studies in England (Anthony, 1958; Kolvin et al., 1971; Rutter and Lockyear, 1967; Cox, Rutter, Newman and Bartak (1975) have consistently found that parents of autistic children are of superior SES. It is felt that in England, the label of infantile autism tends to be more restricted than in the United States.

Evidence that parents of autistic children tend to be of higher SES comes likewise from other foreign countries, like Holland (Teuns and Van de Wijngaart, 1975); Belgium, (Beekmans-Balle, 1973); Denmark, (Brask, 1971). While Coleman herself wrote that "there is a great deal of interest in the parents and families of autistic children, who are often found to be exceptional in social and economic attainment" (1979, p. 274), there are no implications drawn from such findings which, according to Caldwell and al., would be embarrasing to explain if the illness is attributed to organic factors.

It is to be noted that in his research, Kanner (Eisenberg and Kanner, 1956) had a control group of private patients who were selected solely by the fact that they were next in call number to the first 50 autistic children seen, and it was found that the parents of the control group were of considerably lower status. (p. 561) This is a fact that seems to be ignored by Kanner's critics.

During my recent visit in Holland, I found that there were two epidemiological studies conducted, one in the north around Gronigen and the other in the middle of Holland, around the University of Utrecht. (Teuns & Van de Wijngaart, 1975). The Groningen study consisted in approaching institutions for the mentally retarded, mental institutions, special schools to identify cases of infantile autism, while in Utrecht, autistic children were identified through a parents' organization. On the basis of the results obtained in epidemiological past studies, the expectations were that the parents in the latter group would tend to be of higher

SES than the parents of the children who were identified through institutions. However, it was found that, despite these two approaches, social class differences between the North and the middle of Holland, were not reduced. Parents were found to be of higher socioeconomic status in both studies. The epidemiological study by Lotter (1966) through institutions and schools likewise found that parents of autistic children were of upper class. Cantwell et al. (1978), has pointed out that the relative social class/IQ superiority could be attributed to a bias in referral policies, but that this artifact could be eliminated only through the use of total populations statistics. Thus, while such a bias could be found in studies conducted elsewhere, it does not exist in a country like Holland.

As to the differences in SES between parents of autistic children and non-autistic children in the U.S.A., we shall turn to a review by Ornitz and Ritvo (1976) in which they state that three surveys <u>have not</u> confirmed Kanner's original finding on the socioeconomic superiority of the parents of autistic children. Rather than presenting the findings of these three surveys, we prefer to provide the conclusions of the respective authors.

McDermott (1967), who included primarily <u>borderline cases</u> in his research, had the following to say:

> However, the expression of the psychotic illness correlates with social class. Withdrawal and autism in their severe form occurred significantly more often in the

> professional executive group while disturbances of thinking occurred significantly more often in both professional executive and skilled working-class group. These findings suggest the possibility that family styles and customs of child rearing may influence the expression of psychosis (p. 557).

Regarding the survey by Allen et al.(1971), they state the following:

> This study does not explain why children with an initial diagnosis of infantile autism have better educated parents, fathers with higher measured intelligence and families in the upper SES, unlike children with an initial diagnosis of brain damage or mental retardation (p. 324).

The third study referred to by Ornitz and Ritvo is Ritvo et al. (1971), where they found no SES difference between parents of autistic and non-autistic children. However, regarding the criteria for the diagnosis of their cases, they state in a footnote that "the presence of other symptoms (seizures) or diseases did not preclude the diagnosis of autism" (p. 301). King (1975) pointed out that Ritvo et al. (1971) included in their autistic group cases of "pseudoretardate children with atypical development, symbiotics and cases of childhood schizophrenia" (p. 666).

In an extended review of the literature on childhood schizophrenia by a group at the National Institute of Mental

Health (Keith et al., 1976), the following conclusion was written regarding differences in SES between parents of autistic and non-autistic children:

> Much has been written about the background of parents of autistic children, but one by one the myths about them have fallen away in the face of well-designed research protocols (my italics) (p. 547).

To support their conclusion, Keith et al. (1976) refer next to a study by Florsheim and Peterfreund (1974) who found that the mean I.Q. score of parents of "autistic children" was as follows: 109.2 for mothers, and 116.3 for fathers (ranging from 65 to 135). Cantwell et al. (1978) considered this study to be in support of the hypothesis of higher intelligence among parents of psychotic children. It is to be noted that the subjects in Florsheim and Peterfreund's study (1974) were parents of psychotic children and the word, "autistic children" was not mentioned. The aforementioned report by Keith and his group is in opposition to the Report of the Research Task Force of NIMH (1975) where the following comments were made:

> One observation made years ago appears to be still valid: that the parents of an autistic child tend to be of higher socioeconomic level than either the general population or the parents of children with other psychiatric disorders. With only one important exception, numerous studies have attested to the difference, though suggesting that it is not quite as great as first appeared. (p. 204).

Campbell, who is well-known for her extensive work on the uses of psychotropic drugs with psychotic children, presents some interesting data regarding the demographic characteristics of her sample, consisting of 105 children which she had labelled as autistic. In a study with her co-workers (1977), she found that 31% of their parents belonged to social class I and II; 13% belonged to social class III, and 55% belonged to social IV and V. Interestingly enough, she indicated that the social class distribution of her sample is similar to the sample used in Ritvo et al.'s study (1971). The distribution appears to be quite unusual, since high percentages seem to concentrate at both ends of the socio-economic level. Thus it would seem that there is a higher frequency of infantile autism among the upper and the lower class, and somehow the middle class seems to be less affected by the disease. However, the writer feels that children from among the upper class background may be genuinely autistic, à la Kanner, and the rest might be brain damaged. As indicated by Call, (1977) one would expect a higher risk factor of organic etiology with lower class children. We believe the explanation for this surprising, almost bimodal, distribution could be found in an article which Campbell and her group wrote at a later date (1978), indicating that of the total sample, 35 were more seriously autistic, which is very close to her percentage for social class I and II.

Another unusual finding relates to the education of the

parents of these children. It was found that 45.7% of the fathers had college education, 36.2% had finished high school, and 5.7% had elementary schooling, and there was no information on 12% of the fathers. Campbell et al. (1977) admits that there is a preponderance of educated parents in her sample but provides no comment. Such wide difference between the SES distribution and the educational distribution of the same group needs some explanation.

The latest review on the relationship between social class and infantile autism was written by Schopler et al. (1979). In 1972, they undertook a statewide study in North Carolina of families with seriously disturbed children. They were able to identify 522 children and they found that there was no SES distinction between those who were severely autistic, mildly autistic, and those who suffered from related communication handicaps (non-autistic group). However, while they used the term "autistic" in the title of their article, they indicated that the terms "autistic and psychotic are used interchangeably" (p. 144). In a later article by Schopler, Reichler, DeVellis and Daly (1980), they provide further information regarding the criteria for their diagnosis, stating the following:

> The resulting instrument was initially called the Childhood Psychosis Rating Scale (CPRS). Because our scale reflected a broader conceptualization than Kanner's classic definition of autism, we had consciously chosen the term psychosis rather than autism so as

> to minimize confusion. However, in light of increasing evidence that the definition of autism has expanded and is no longer restricted to Kanner's use of the term, we now call our instrument the Childhood Autism Rating Scale (p. 92).

Using Rimland's Check List which is very close to Kanner's criteria, Schopler and al. (1980) found that, out of the 450 cases of these disturbed children, only 8 were considered autistic. On the basis of the above, their criticiam of Kanner is not justifiable since they admit taking the liberty of expanding the definition of autism.

We reanalyzed their data and compared the social class between mildly and severely autistic, and obtained a Chi square of 3.58 which is close to 3.84 required for significance at the 5% level. Furthermore, when we compared black/white differences between mildly-moderately autistic and severely autistic, we found that the latter group had more white autistic children, which would thus include more of the upper class families. We found a Chi square of 4.83, which is significant beyond the 5% level. In conclusion, it can be stated there was no justification on the part of Schopler et al. (1979, 1980) in disclaiming that parents of autistics belong to upper socioeconomic classes, inasmuch as they unilaterally widened the definition of autism. Nonetheless, when we reanalyzed their data, it was seen that the more severely autistic the group is, the more likely they come from upper SES families. As a result of all the papers reviewed,

the answer to Schopler et al. (1979), whose paper is titled, "Do Autistic Children Come From Upper Middle Class Parents?" would tend to be positive. In an Appendix attached to this paper, we have included the six studies used by Schopler et al. (1979) to demonstrate that there are no differences between the socioeconomic status of the parents of autistic and non-autistic children. A careful analysis of these studies do not bear out their general conclusions.

Because of this insistence that infantile autism, as loosely defined by some of the authors reviewed in this paper, tends to be organically determined, Call (1977) has justifiably pointed out that no demographic studies of children with autism have shown a higher incidence of the disease in the low socioeconomic classes or in poor neighborhoods, where one might expect a higher risk factor in organic etiology with young children.

Discussion

This almost universal attitude to relate psychopathology to brain damage in general, has been described in innumerable research studies outside the area of infantile autism. Werry (1979) of the Department of Psychiatry at the University of Auckland in New Zealand, provided a detailed review on the relationship between brain damage or organic factors and deviant behavior, and expresses his skepticism about that relatioship. The following summarizes the major points:

1. There is little evidence to suggest that brain damage or dysfunction is either necessarily or very frequently accompanied by psychopathology, though the risk would appear definitely increased.
2. There is no support for the idea that all psychopathological conditions are organically determined or that certain behavior symptom-complexes always reflect brain damage....Furthermore, these complications are highly correlated with social pathology, (my italics) which is, itself a cause of behavior disorders.
3. Many of the studies examining the relationship between brain damage and behavior in children are methodologically grossly inadequate.
4. On the basis of present evidence, it seems most reasonable to conclude that brain damage or dysfunction is simply one of several variables....

that interact in a complex multivariate fashion to determine personality and behavior. In the majority of instances, brain damage appears to be a variable of relatively weak effect in the interaction.

5. In the present state of knowledge, the diagnosis of brain damage appears to have little significance in the treatment situation, except to relieve parents' guilt and their persecution by society and helping professions. (p. 124).

The need for expressing the above opinions in this paper is that even in cases where there is evidence of organicity, there is some question as to its relationship with deviant behavior. The relationship should be even weaker in cases of infantile autism where the evidence of organicity is very problematic.

For another approach to this most baffling problem, the author suggests a third avenue of research which he has called the sociocultural approach, one hardly ever dealt with in the literature, except for Lotter (1978) who was interested to study infantile autism in Africa. This reluctance of dealing with the problems outside the prevailing thinking on infantile autism is reflected in a letter received from a South African psychiatrist in response to a questionnaire which I had mailed in several parts of the world. In this letter she made the following comments:

"The incidence in the various cultural groups in

our country are very striking and have a significance which is only partly understood and even poorly accepted." (my italics).

Thus, it can be seen that the data which has been provided for the organic etiology of infantile autism is non-existent. Furthermore, most of the studies used to discount Kanner's original finding on the socioeconomic superiority of parents of autistic children, if analyzed carefully, are more likely to strengthen Kanner's argument.

The problem lies primarily in the tendency of researchers to lump together groups of children with various mental and physical disabilities and call them autistic. We have provided a few examples which indicate that the diagnosis of autism has been extended beyond what Kanner had originally conceptualized. This has resulted in major contradictions among various studies. It is suggested that only after some serious work be devoted at an international level to set up a well defined and standardized diagnostic system of infantile autism, that the chaotic condition of the field may subside. But it can be stated at the present time that, in view of the widespread conviction that infantile autism in all its forms is organically determined, that this is more myth than fact, a conclusion which was reached after a careful reading of the literature..

REFERENCES

Allen, J., DeMyer, M., Norton, J., Pontius, W., and Yang E. Intellectuality in parents of psychotic, subnormal, and normal children. Journal of Autism and Childhood Schizophremia, 1971; 1, 311-326.

Anthony, J. An experimental approach to the psychopathology of childhood: Autism. British Journal of Medical Psychology, 1958; 31, 211-225.

Beeckmans-Balle, M. Le syndrome d'autisme infantile. Acta Psychiatrica Belgica, 1973, 73, 537-555.

Bettelheim, B. The Empty Fortress, New York, Free Press, 1967

Bleuler, Manfred. The schizophrenia disorders: patient long-term and family studies, New Haven: Yale University Press, 1978.

Brask, Birte Hoeg. A prevalence investigation of childhood psychoses. Paper delivered at the 16th Congress of Psychiatry, July 2, 1970.

Call, J.D. Autistic behavior in infants and young children./ Practice of Pediatrics, Vol. 1, Chapter 4A, Hagerstown, Maryland: Harper and Row, 1977. in Vincent E.Kelley,(ed).

Campbell, M., Hardesty, A.A. and Burdock, E.I., Polevoy, N.T. and Geller, B. Selected pre-, peri-, and postnatal and demographic characteristics of autistic children. Paper presented at the Annual meeting of the American Academy of Child Psychiatry, Oct. 1977, Dallas, Texas.

Cantwell, Dennis, P. Baker, L. and Rutter, M. Family factors in M: Rutter and E. Schlopler (Eds.) Autism, A Reappraisal of Concepts and Treatment. New York: Plenum Press, 1978; Chapter 18, 269-296.

Cohen, D.J. and Caparulo, B. Childhood Autism. Children Today, 1975, 4, 2-6.

Coleman, M. Studies of the autistic syndromes in R. Katzman (Ed.), Congenital and acquired cognitive disorders. Raven Press, N.Y. 1979, 265-275.

Crawley, C.A. Infantile autism - an hypothesis. Journal of the Irish Medical Association, 64, 335-345, 1971.

Cox, A., Rutter, M., Newman, S. and Bartak, L. A comparative study of infantile autism and specific developmental receptive speech disorder. II The families; parental characteristics. British Journal of Psychiatry; 1975, 126, 146-159.

Eisenberg, L., and Kanner, L. Early infantile autism, 1943-55, American Journal of Orthopsychiatry, 26, 556-566, 1956.

Florsheim, J. and Peterfreund, C. The intelligence of parents of psychotic children. Journal of Autism and Childhood Schizophrenia, 1974; 4, 61-70.

Guthrie, R.D. and Wyatt, R.J. Biochemistry and Schizophrania III. A review of childhood psychosis. Schizophrenia Bulletin, 1975, 12, 19-30.

Hanson, D.R. & Gottesman, I.I. The genetics, if any, of infantile autism and childhood schizophrenia. Journal of Autism and Childhood Schizophrenia, 1976, 6, 209-234.

Kanner, L. Autistic disturbances of affective contact. Nervous Child, 2: 217-250, 1943.

Kanner, L. Problems of nosology and psychodynamics of early infantile autism. American Journal of Orthopsychiatry, 1949, 19, 416-426.

Kanner, L. Child Psychiatry. Springfield: C.C. Thomas, 1972.

Keith, S.J., Gunderson, J.G., Reifman, A., Bucksbaum, S., and Mosher, L.R. Special report: Schizophrenia. Schizophrenia Bulletin, 1976; 2, 509-565.

Kernberg, P. Childhood schizophrenia in L. Bellak. The Schizophrenia Syndrome, N.Y. Basic Books, 1979.

Klaus , M.H. and Kennell, J.H. Maternal-infant bonding. St. Louis: C.V. Mosby Co., 1976.

King, P.D. Early Infantile Autism: Relationship to Schizophrania. Journal of the American Academy of Child Psychiatry, 1975; 14, 666-682.

Kolvin, I., Omnsted, C., Richardson, L.M., and Garside, R.F. The family and social background in childhood psychoses. Studies in the childhood psychosis, III, etc. British Journal of Psychiatry, 1971; 118, 396-402.

Lotter, V. Epidemiology of autistic conditions in young children: II Some characteristics of the parents and children. Social Psychiatry, 1967, 1, 163-183.

McDermott, J.F., Harrison, S.I., Schrager, J., Lindy, J., and Killins, E. Social class and mental illness in children: the question of childhood psychosis. American Journal of Orthopsychiatry, 1967; 37, 548-557.

Ornitz, E.M., and Ritvo, E.R. Neurophysiologic mechanisms underlying perceptual inconstancy in autistic and schizophrenia children. Archives of General Psychiatry, 1968, 19, 22-28.

Ornitz, E.M. & Ritvo, E.R. The syndrome of autism: a critical review. American Journal of Psychiatry, 1976; 133, 609-621.

Research in the Service of Mental Health. Report of the Research Task Force of the National Institute of Mental Health. Editor-in-Chief, Julius Segal, DHEW Publication No. (ADM) 75-236. N.I.M.H. 1975.

Rimland, B. Infantile Autism. New York: Appleton-Century Crofts, 1964.

Rimland, B. Infantile autism: Status and research in Anthony Davids (ed.) Child personality and psychopathology. Current topics, Vol. 1, Chapter 4, 137-167. N. Y. John Wiley & Son, 1974.

Ritvo, E.R., Cantwell, D., Johnson, E., Clements, M.C., Benbrook, F., Slagel, S., Kelly, P., and Ritz, M. Social class factors in autism. Journal of Autism and Childhood Schizophrenia, 1971; 1, 297-310.

Ritvo, E.R. Biochemical studies of children with the syndrome of autism, childhood schizophrenia, and related developmental disabilities: a review. Journal of Child Psychology and Psychiatry, 1977; 18, 373-379.

Ritvo, E.R. Autism from adjective to noun./ In E.R.Ritvo (ed) Autism: Diagnosis, Current Research and Management, New York: Spectrum Publications, 1976; Chapter 1, p. 3-6.

Rutter, M. & Lockyer, L. A five to fifteen year follow-up of infantile psychosis: 1. Description of sample. British Journal of Psychiatry, 1967; 113, 1169-1182.

Rutter, M. Infantile autism and other child psychoses in Rutter, M. and Hersow, L. (Eds.). Child psychiatry: Modern approaches. Oxford (England) Blackwell Scientific Publications, 1977, Chapter 30, 717-747.

Sanua, V. D. The Enigma of infantile autism: A psychocultural approach. Presented at the International Congress of Child Psychology, Paris, July, 1978, University of Paris.

- - - - - - Childhood schizophrenia and autism: A critical review of the issues from the sociocultural point of view. (61 pages) Presented at the 7th Annual Meeting of the Society for Cross Cultural Research, Feb. 24, 1978a, Yale University, New Haven.

- - - - - - The Socioeconomic background of parents of autistic children children: A critical review of the literature. Presented at the American Psychological Association Convention in Montreal, Canada - September 4, 1980 Chateau Champlain.

- - - - - - Autism, childhood schizophrenia and culture: A critical review. Transcultural Psychiatric Research Review; an overview article, 1981, Vol. XVIII, 165-181.

- - - - - - Cultural changes and psychopathology in children: with special reference to infantile autism. Acta Paedopsychiatrica, Zurich, Switzerland. (in press, 1981a)

- - - - - - Cultural changes and psychopathology in children: with special reference to infantile autism. 40 pages. Presented at the American Psychological Convention in New York, 1979, Hilton Hotel Sept. 3, 1979. Appeared in Eric. ED 189 793 EC 124 517. December issue of Resources in Ecucation (Rie) 1981b.

Schopler, E., Andrew, C.E., & Strupp, K. Do autistic children come from upper-middle class parents? Journal of Autism and Developmental Disorders, 1979; 9, 139-152.

Schopler, E., Reichler, R.J., Devellis, R.F. and Daly, K. Toward objective classification of childhood autism; Childhood Autism Rating Scale (CARS). Journal of Autism and Developmental Disorders, 1980; 10, 91-103.

Teuns, J.P. & van de Wijngaart, G.F. The autistically behaving child and its parents. State University of Utrecht, Dept. of Psychology, 1975.

Tinbergen, N. Ethology and stress diseases. Sciences, 1974,185, 20-28.

Wing, L. Concept of Autism, A review. Australian Pediatry Journal, 1973, 9, 246-247.